Expansion–Collapse Coupled Universe

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Abstract:

There are many theories related to the universe, but what we actually need to know is that, even if there is a creator of the universe, that creator must have been created by something. The biggest minds the earth has given birth to do not know what nothing is. In this research, I tried to think about it. The word Nothing is not just a hypothetical word; nothing is something that cannot be described. Here, I proposed the "Expansion–Collapse Coupled Universe (ECCU) Theory", which can best explain the creation between the physical world and nothing.

Keywords: Universe, ECCU Theory, Big-Bang, Expansion of nothing

Background:

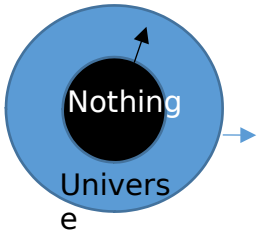
We are in a physical world. We believe in materialism. Even quantum particles like electrons and photons behave as matter. Expect that there is nothing. But considering them, what makes them matter is actually nothing (Kirillov and Savelova, n.d.). Although many physical phenomena appear highly complex, they are often governed by remarkably simple fundamental principles, it is reasonable to expect that the collapse and expansion of the universe may also be describable by a simple underlying principle. In this work, I present the ECCU Theory, which proposes a simplified framework for understanding the cyclic processes of universal collapse and expansion.

The big-bang theory about the universe is even considered that the creation was from a very energetic ball that exploded and the energy converted into matter according to a simple physical formulation:

$E= MC^2$ 1

More theory explains the expansion of the universe and finally its collapse, i.e., big crunch, but what makes it stop expanding (Starkman et al., 2024)? Why not the universe continue to expand to increase the entropy (Pandey, 2017)? This is what I think is different! Instead of a big crunch, the universe will keep expanding, but nothing that exists at the origin of the big-bang expands outward (Kleban and Senatore, 2016).

***Mathematical formulation of the* ECCU Theory**



As we all know, the outer surface of a sphere is directly proportional to the square of the radius of the sphere. Both the expanding universe and the nothing depend upon the square of the radius of expansion and nothing.

$A_e = 4\pi R_e^2$ 2

$A_n = 4\pi R_n^2$ 3

Here, $\frac{dA_e}{dA_n} = \frac{R_e}{R_n}\frac{dR_e}{dR_n}$ 4

But for both processes, the change of area is the same. Since nothing follows the physical world, the delay in time explains that $R_e > R_N$. So that $dr_n > dA_e$. i.e., the radius of nothing increases faster than the radius of the expanding universe. Hence, nothing can cover the physical world like a trough behind the crest of a water wave in a pond. The simple formulation explains that there is a simple theory behind every event, but we make it complex.

Conclusions:

Everything is created from nothing and vice versa, making new universes with time. It keeps on going with time and never stops following the “ECCU Theory”. It is like a crest and trough in a ripple. At a large distance from the origin of big-bang, the shape of the physical world collapses, but a new one is being created at the same time. The time delay between the expansion of the universe and nothing can be considered as from the time when we consider the big crunch from the older theories that can relate the explanations of its weak expansion force and strong critical density. But, the change in thinking is that instead of a big crunch, the universe will begin to tear up from the origin of the Big Bang, creating a hollow sphere such that the speed of expansion of nothing is faster than the speed of expansion of the universe.

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